

# Can performance-based financing be used to reform health systems in developing countries?

Megan Ireland,<sup>a</sup> Elisabeth Paul<sup>b</sup> & Bruno Dujardin<sup>a</sup>

**Abstract** Over the past 15 years, performance-based financing has been implemented in an increasing number of developing countries, particularly in Africa, as a means of improving health worker performance. Scaling up to national implementation in Burundi and Rwanda has encouraged proponents of performance-based financing to view it as more than a financing mechanism, but increasingly as a strategic tool to reform the health sector. We resist such a notion on the grounds that results-based and economically driven interventions do not, on their own, adequately respond to patient and community needs, upon which health system reform should be based. We also think the debate surrounding performance-based financing is biased by insufficient and unsubstantiated evidence that does not adequately take account of context nor disentangle the various elements of the performance-based financing package.

Abstracts in عربي, 中文, Français, Русский and Español at the end of each article..

## Introduction

Performance-based financing (PBF) is an intervention that is gaining significant momentum as a solution to poor performance and the health worker crisis in low-income countries, particularly in Africa.<sup>1</sup> Results indicate that PBF can play a role in increasing the productivity of health workers and have positive effects on health service utilization.<sup>2-5</sup> The increasing use of PBF and its perceived benefits is now leading proponents to promote it as a strategy to address structural problems and to introduce more generalized health system reform, as testified by the recent paper in the *Bulletin of the World Health Organization* "Performance-based financing: just a donor fad or a catalyst towards comprehensive health-care reform."<sup>1</sup> We believe that the current optimism for such a strategy is unsubstantiated and underestimates important constraints to its implementation. It also risks falling into the trap of seeking a "magic bullet" solution to improving complex social systems.

## Lack of evidence

PBF is an intervention designed to increase the quantity and quality of health care based on the theory that providing financial incentives to health workers for meeting output targets will motivate them to produce more or better outcomes and hence improve their performance. While the proponents of PBF make grand claims about its achievements and potential, an overview of the literature reveals that there is very little evidence to support these claims.<sup>6-10</sup> This is largely due to the fact that it is very difficult to evaluate PBF. To date most studies have sweepingly attributed most or all changes at district health facility level to the PBF intervention with little or no regard for contributing factors nor insight into how or why changes have occurred.<sup>6-10</sup> To our knowledge, only one evaluation in Rwanda<sup>3</sup> was carried out that isolates the effect of PBF incentives from increased resources. PBF is a comprehensive intervention in a complex, context-specific system. It seeks to improve the health sector by changing the organizational structure of the health system

with regard to its financing mechanisms, information systems, planning, monitoring and evaluation. Any evaluation therefore needs to account for such methodological challenges and take into account the context (economic, social, political), as well as the content and the process of implementation. While the Rwandan study can give us more insight into that country's particular case, quasi-experimental evaluation designs are limited in evaluating interventions that have such high variance (context, content, process).<sup>11</sup> Arguably, the focus should be on the reasons why and how the intervention is working rather than whether or not it is working.

## What are the side-effects?

An overview of the literature on PBF not only highlights weak evaluations with questionable study designs but also several other anomalies. Possible adverse effects that financial incentives can have on health worker motivation and performance include: focusing on targeted services at the expense of other services (distortions); false reporting (gaming); cherry-picking patients that make it easier to meet targets; focusing on quantity rather than quality of services because it is methodologically easier to implement and monitor; increasing inequity by rewarding providers and facilities that are in a better position to meet targets; temporary improvements to services that cease as soon as the target is lifted; and dilution of intrinsic motivation.<sup>12</sup> Despite significant documentation regarding these effects, there have not been any studies to evaluate their impact.<sup>6,10</sup> This absence of evaluation of the possible negative consequences of PBF is reflected in a favourable bias for PBF in the literature. This is due both to a publishing bias towards studies that demonstrate successful implementation and the fact that most published authors are actively involved in the implementation of PBF initiatives.

## Is it efficient?

After more than a decade of implementation it is time to give serious consideration to efficiency, i.e. maximizing the level and

<sup>a</sup> School of Public Health, Université Libre de Bruxelles, 50 avenue FD Roosevelt, Brussels, Belgium.

<sup>b</sup> Department of Social Change and Development, Université de Liège, Belgium.

Correspondence to Megan Ireland (e-mail: [megan.ireland@ulb.ac.be](mailto:megan.ireland@ulb.ac.be)).

(Submitted: 16 February 2011 – Revised version received: 27 April 2011 – Accepted: 28 April 2011)

quality of health system output while minimizing costs. There is very little, if any, evidence of the cost-effectiveness of PBF.<sup>8,13</sup> In addition to the extra funding needed to pay incentives and thus increase health-worker earnings, the transaction costs of PBF implementation are necessarily high. In most cases there is a need for new bodies or structures (from independent purchasing bodies to civil society organizations charged with community oversight) and strengthening of existing structures (especially health information systems). It would appear that the opportunity costs are also high. Health workers have increased reporting and administrative burdens<sup>14</sup> due to the effort required for monitoring and evaluating performance targets. This is not only to enable the accurate allocation of premiums but also to ensure against “gaming” and should, although this is rarely the case, also monitor for potential adverse effects on non-targeted activities. As PBF gains increasing support and a growing number of countries implement, or plan to introduce it, it is paramount to start taking account of the real costs and benefits and financial sustainability of PBF interventions.

### Is it replicable?

We notice in the literature that most claims of the success of PBF pertain to Rwanda. Rwanda was one of the first developing countries to implement PBF and was the first country to implement it on a national scale and is therefore an important case to study. However, the fact that PBF implementation has been successful in Rwanda is not grounds on which to believe that this intervention can be successfully replicated elsewhere – a concern shared by others, as recently published in the *Lancet*.<sup>15</sup> The success (or failure) of PBF, as a comprehensive social intervention, is entirely dependent on the context. Many authors have defined conditions necessary for the success of PBF such as: strong leadership and management support, accurate information and reporting systems, increased funding and training.<sup>7,8,12,16</sup> It would appear that Rwanda had the right conditions

to effectively take on the challenge of implementing a successful PBF intervention. However, it should not be presumed that this is easily achieved elsewhere. Because PBF is a comprehensive package of reforms, a range of technical as well as contextual constraints can significantly hinder its implementation. Examples of constraints include: the need to have the management capacity at national and local level for effective implementation; the need for a flexible public finance management system that has the capacity to easily mobilize resources to the local level; and the significant methodological challenge of designing a reward system that is equitable, socially acceptable and that promotes quality as highly as quantity of both targeted and non-targeted services.

In addition to technical conditions, the contextual country conditions are equally important for success. As a package of interventions, greater analysis is needed into which elements of the package are most beneficial and the reasons for this. For example, the payment of incentives (the only defining feature of the package specific to PBF) in relation to other elements such as increased coaching, supervision, accountability, increased salaries and increased spending for health.

We argue therefore that a more comprehensive evaluation, supported by clear evidence, should be used to inform the debate about PBF. One of the main reasons for the Rwandan success is strong leadership and political will. However, this political motivation has effectively stifled debate on the topic, making it difficult for stakeholders to raise concerns, for example, about unintended adverse consequences. This sensitivity contributes to the favourable bias but is unhelpful in informing the discussion on the development of PBF. During recent field visits to Rwanda, we have observed waning enthusiasm from health workers who have become accustomed to receiving financial incentives and we therefore question their sustainability as a motivating factor.

### Basis for reform

The relative success and interest in PBF suggest that it has a role to play in im-

proving health-worker performance but we resist the notion that it can be applied as a foundation to health system reform in low-income countries. By nature, PBF is economically driven and focuses principally on public finance. Indeed it is assumed that performance-based contracting is equally applicable to other sectors<sup>1</sup> but as such it overlooks the human dimension to development. The *World health report 2008: primary health care now more than ever*<sup>17</sup> reminds us that better health outcomes are best achieved when service delivery is organized around people’s needs and expectations and that “putting people first” should be the focus of reforms. But the setting of service delivery targets actually risks creating a conflict of interest between patients and providers and can act as a disincentive to patient-centred care. For example, the successful referral of a pregnant woman to a health centre or hospital for delivery is, above all, dependant on the quality of the relationship between the woman and her health provider. It is counter-intuitive to expect that fulfilling antenatal targets will automatically create a good relationship that will ensure follow-up care and a positive outcome of her pregnancy.

PBF has international support because it fits neatly into the Millennium Development Goals aid paradigm for rapid progress on a few key indicators. But we think it is misplaced to focus on outcomes and results without a thorough understanding and development of the processes and relationships that are necessary to obtain sustained improvements and quality of care. While quantitative targets can encourage creativity to increasing access, we wonder if quality of health care can ever really be improved when the system and its providers focus on targets linked to financial gain instead of on patient-centred care and the needs of the populations they serve. History has shown us that there are no “magic bullet” solutions for reforming the health sector and, while good financial management is necessary, it cannot be the motor of reform. ■

**Competing interests:** None declared.

## الملخص

## هل يمكن الاستفادة من التمويل المستند على الأداء في إصلاح النظم الصحية في البلدان النامية؟

التأثيرات والمستقرة من منظور اقتصادي لا تستجيب، في حد ذاتها، استجابة ملائمة لاحتياجات المرضى والمجتمع، وهي ما يجب أن يركز عليهما إصلاح النظام الصحي. كما نعتقد أيضاً أن النقاش الدائر حول التمويل المستند على الأداء غير حيادي نتيجة للبيئات غير الكافية وغير المدعومة بأدلة والتي لم تراعى السياق أو تحلل العناصر المختلفة لحزمة التمويل المستند على الأداء.

طوال الخمس عشرة سنة الماضية، اتسع تطبيق التمويل المستند على الأداء في عدد متزايد من البلدان النامية، ولاسيما في أفريقيا، كوسيلة لتحسين أداء العاملين الصحيين. وأدى توسيع نطاق تطبيقه على الصعيد الوطني في بروندي ورواندا إلى تشجيع مؤيدي التمويل المستند على الأداء واعتباره آلية أعظم من كونها آلية للتمويل، والنظر إليه كأداة استراتيجية لإصلاح القطاع الصحي. ونحن نعترض هذه النظرة على أساس أن التدخلات المستندة على

## 摘要

## 基于绩效的筹资能用来改革发展中国家的医疗卫生系统吗？

在过去的15年里，基于绩效的筹资已经作为一种改善医疗工作者工作表现的手段在越来越多的发展中国家实施，特别是在非洲的一些国家。布隆迪和卢旺达将其扩大到全国范围内实施，这已经鼓励了基于绩效筹资的支持者逐渐将其视为改革医疗健康领域的一种战略工具，而不仅仅是一项筹资机制。我们抵制这一观念，理由是，基于结果和受

经济驱动的干预本身并未充分满足病人和社区需要，而后者正是医疗卫生系统改革的基础。同时我们认为，围绕基于绩效筹资的争论因证据不充分并缺乏依据而存在偏见，因为这些证据既未考虑背景又未解决基于绩效的筹资方案的各种要素。

## Résumé

## Le financement lié aux résultats peut-il être utilisé pour réformer les systèmes de santé dans les pays en voie de développement ?

Au cours des 15 dernières années, le financement basé sur les résultats a été mis en place dans un nombre croissant de pays en voie de développement, en particulier en Afrique, comme moyen d'améliorer les résultats du personnel soignant. Le passage à la mise en place nationale, au Burundi et au Rwanda, du financement basé sur les résultats a encouragé ses partisans à le considérer comme étant plus qu'un simple mécanisme de financement, mais de plus en plus comme un outil stratégique permettant de réformer le secteur de la santé. Nous

nous opposons à cette opinion, arguant que les interventions basées sur les résultats et dictées par l'économie ne répondent pas de manière adéquate, à elles seules, aux besoins des patients et de la communauté, sur lesquels la réforme du système de santé doit reposer. Nous pensons également que le débat autour du financement basé sur les résultats est influencé par des preuves insuffisantes et non fondées qui ne prennent pas correctement en compte le contexte ni ne démêlent les différents éléments du plan de financement basé sur les résultats.

## Резюме

## Можно ли использовать систему финансирования по результатам деятельности в качестве инструмента реформирования системы здравоохранения в развивающихся странах?

В течение последних пятнадцати лет финансирование по результатам деятельности получает все более широкое распространение в развивающихся странах, особенно в Африке, как средство повышения производительности труда работников здравоохранения. Внедрение этой системы в общенациональном масштабе в Бурунди и Руанде побудило сторонников финансирования по результатам деятельности относиться к нему не просто как к механизму финансирования, но, во всевозрастающей степени, рассматривать его как стратегический инструмент реформирования сектора здравоохранения. Мы выступаем против такой трактовки, поскольку основанные на

результатах и экономически мотивированные меры вмешательства, как таковые, не вполне отвечают нуждам пациентов и общин, которые должны быть положены в основу реформы системы здравоохранения. Мы также считаем, что дискуссия вокруг системы финансирования по результатам деятельности носит необъективный характер, так как основывается на неполной и неподтвержденной информации, которая недостаточно учитывает конкретные условия и не позволяет рассмотреть по отдельности различные элементы пакета финансирования по результатам деятельности.

## Resumen

## ¿Se puede utilizar la financiación basada en el rendimiento para reformar los sistemas sanitarios en países en desarrollo?

Durante los últimos 15 años, la financiación basada en el rendimiento se ha implementado en un número cada vez mayor de países en desarrollo, particularmente en África, como un medio para mejorar el rendimiento del trabajador sanitario. La ampliación de la implementación nacional

en Burundi y Ruanda ha animado a los partidarios de la financiación basada en el rendimiento a que se considere como algo más que un mero mecanismo de financiación y a que se tenga en cuenta cada vez más como una herramienta estratégica utilizada para reformar el sector sanitario.

Nos oponemos a dicha noción, basándonos en que las intervenciones basadas en los resultados y motivadas por la economía no responden adecuadamente, por sí mismas, a las necesidades de los pacientes y la comunidad, que es en lo que se debería basar la reforma del sistema sanitario. También opinamos que el debate sobre la financiación basada en

el rendimiento está sesgado por la falta de evidencias y por fundamentos que no tienen en cuenta el contexto adecuadamente y que no esclarecen los diversos elementos incluidos en el paquete de financiación basada en el rendimiento.

## References

1. Meessen B, Soucat A, Sekabaraga C. Performance-based financing: just a donor fad or a catalyst towards comprehensive health-care reform? *Bull World Health Organ* 2011;89:153–6. doi:10.2471/BLT.10.077339 PMID:21346927
2. Eichler R. Can “pay for performance” increase utilization by the poor and improve the quality of health services. [Discussion paper for the first meeting of the Working Group on Performance Based Incentives]. Washington: Centre for Global Development; 2006. Available from: <http://www.eldis.org/vfile/upload/1/document/0708/DOC23033.pdf> [accessed 29 June 2011].
3. Basinga P, Gertler PJ, Binagwaho A, Soucat ALB, Sturdy J, Vermeersch CMJ. Effect on maternal and child health services in Rwanda of payment to primary health-care providers for performance: an impact evaluation. *Lancet* 2011;377:1421–8. doi:10.1016/S0140-6736(11)60177-3 PMID:21515164
4. Soeters R, Habineza C, Peerenboom PB. Performance-based financing and changing the district health system: experience from Rwanda. *Bull World Health Organ* 2006;84:884–9. PMID:17143462
5. Meessen B, Kashala JPI, Musango L. Output-based payment to boost staff productivity in public health centres: contracting in Kabutare district, Rwanda. *Bull World Health Organ* 2007;85:108–15. doi:10.2471/BLT.06.032110 PMID:17308731
6. Oxman AD, Fretheim A. Can paying for results help to achieve the Millennium Development Goals? A critical review of selected evaluations of results-based financing. *Journal of Evidence Based Medicine*. 2009;2:184–95. doi:10.1111/j.1756-5391.2009.01024.x PMID:21349012
7. Eldridge C, Palmer N. Performance-based payment: some reflections on the discourse, evidence and unanswered questions. *Health Policy Plan* 2009;24:160. doi:10.1093/heapol/czp002 PMID:19202163
8. Brenzel L, Measham A, Naimoli J, Batson A, Breidenkamp C, Skolnik R. *Taking stock: World Bank experience with results-based financing (RBF) for health*. Washington: The World Bank; 2009.
9. Scheffler R. *Pay for performance, programs in health services: what is the evidence?* [World Health Report 2010 background paper 31]. Geneva: World Health Organization; 2010.
10. Toonen J, Canavan A, Vergeer P, Elovainio R. *Learning lessons on implementing performance based financing from a multi-country evaluation*. Amsterdam: KIT (Royal Tropical Institute); 2009.
11. Walshe K. Understanding what works – and why – in quality improvement: the need for theory-driven evaluation. *Int J Qual Health Care* 2007;19:57. doi:10.1093/intqhc/mzm004 PMID:17337518
12. Oxman AD, Fretheim A. *An overview of research on the effects of results-based financing* [Report no. 16-2008]. Oslo: Norwegian Knowledge Centre for the Health Services; 2008.
13. Oxman AD, Fretheim A. Can paying for results help to achieve the Millennium Development Goals? Overview of the effectiveness of results based financing. *Journal of Evidence Based Medicine*. 2009;2:70–83. doi:10.1111/j.1756-5391.2009.01020.x PMID:21348993
14. Kalk A, Paul FA, Grabosch E. “Paying for performance” in Rwanda: does it pay off? *Trop Med Int Health* 2010;15:182–90. doi:10.1111/j.1365-3156.2009.02430.x PMID:19930141
15. Montagu D, Yamey G. Pay-for-performance and the Millennium Development Goals. *Lancet* 2011;377:1383–5. doi:10.1016/S0140-6736(11)60544-8 PMID:21515147
16. Canavan A, Toonen J, Elovainio R. *Performance based financing: an international review of the literature*. Amsterdam: KIT (Royal Tropical Institute); 2008.
17. *World health report 2008: primary health care now more than ever*. Geneva: World Health Organization; 2008.